

Standardized Interim Progress Report

A. Project Identifiers

- | | |
|--|----------------------------------|
| 1) Award Number: | NA16FX1413 |
| 2) Grant Program/CFDA#: | Marine Mammal Data Program/SSLRI |
| 3) Name of Recipient Organization: | University of Alaska-Southeast |
| 4) Principal Investigator: | Janice M. Straley |
| 5) Project Title: Investigations of Steller Sea Lion Predation by Killer Whales in Southeastern Alaska | |
| 6) Funding: Federal: \$210,774 | Match: \$0 |
| 7) Award Period: From: July 1, 2001 through June 30, 2004 | |
| 8) Period Covered by this Report: <u>From July 1, 2001 to December 31, 2001</u> | |

B. Project Summary

Studies of killer whale predation on declining Steller sea lion populations have suggested that killer whales may have contributed to the decline and that predation is preventing recovery. However, a lack of information on killer whales exists for many areas of Alaska. Killer whale population numbers and the proportion of that population that eat marine mammals are needed to fully assess this situation. We propose to study killer whale predation rates in southeastern Alaska, where Steller sea lion numbers are increasing. The population dynamics of Steller sea lions that live in southeastern Alaska may be similar to what existed historically in western Alaska, where Steller sea lion numbers have declined dramatically since the 1970s. The project goals will be to 1) provide observational data on killer whale predation upon an increasing Steller sea lion population and 2) collect acoustic recordings to determine the structure and composition of killer whale calls at the time of kills. The primary objective will be to compare data collected during this study with data from concurrent studies in the Gulf of Alaska and Aleutian Islands conducted by the North Pacific Universities Marine Mammal Research Consortium (NPUMMRC). NPUMMRC will use these data in mathematical models of killer whale predation by region in Alaska to better understand the role of predation in the decline and recovery of Steller sea lions.

C. Summary of progress and Results

- 1) For each objective, describe tasks scheduled for the reporting period.
 - a. Field work in Sept to Dec using small vessels to collect photographs of killer whales.
 - b. Record vessel survey times and tracks lines to calculate effort.
 - c. Establish a reporting network to alert the research team to presence of killer whales.
 - d. Acoustic methods used to locate and track killer whales.
 - e. Behavioral observations of predation events and collection of prey remains.

- f. Coordinate data effort with NPUMMRC.
- 2) Describe activities undertaken to achieve scheduled tasks (follow tasks outlined from 1) above).
 - a. Fieldwork consisting of 21 vessel surveys was conducted 1 Sept to 31 Dec 2001. No killer whales were observed to photograph.
 - b. Vessel survey time searching for killer whales was 41.5 hrs and track lines totaled 268nm.
 - c. A reporting network was established consisting of a cell phone, radio public service announcements and notices at harbors and other places where mariners might frequent. Media coverage included radio interviews. Three reports of killer whale sightings were recorded.
 - d. The permanent hydrophone listening station in Sitka Sound is not yet operational. This was scheduled for late 2001 and completion is now forecast for Feb 2002. Acoustic monitoring was conducted once when killer whales were reported but not observed by the research team.
 - e. No predation events were observed.
 - f. UAS PI Straley met with NPUMMRC researchers conducting similar predation studies in western Alaska in Vancouver, BC, December 01 to coordinate research activities.
- 3) If there were changes to the goals/objectives during the reporting period, please detail the circumstance and nature of change.

There were no changes to the goals or objectives during this period.
- 4) Describe results and/or specific products (i.e., publications, data, technology, web site updates prepared during the reporting period. Attach copies of publications or reference publications.

No products have resulted thus far from this research. The data gathered thus far is reported in 2) a-f above.

D. Problems

- 1) Explain circumstances of problems that prevented completion of a scheduled task. Describe any consequences resulting from inability to complete a given task, i.e. need for time extension, shortage of funds, budget revision.
 - Vessel surveys-surveys were not always conducted twice a week but at least once a week. Severely inclement weather this fall prevented twice weekly surveys. This is not a huge problem as in the description in the proposal methods, surveys were to be conducted "2 days per week, weather permitting."
 - No killer whales were observed to photograph or obtain information/samples on predation.
 - The permanent acoustic listening station had difficulty shipping necessary equipment after the September 11, 2001 situation which delayed construction.
 - There has been a change in the distribution of herring in Sitka Sound from previous years. Herring for the past 15 years have come into Eastern Channel,

just south of Sitka during the fall and winter. Following the herring were Steller sea lions and killer whales looking for sea lions to eat. This was the basic premise of my proposal based on 15 years of observations of the interactions between these species during the fall and winter. Essentially, the predators would come within fairly easy working distance to Sitka. But something has changed in Sitka Sound this year. There are herring in Sitka Sound but in a different area, further away and more difficult to survey. This may create a problem with my being able to survey twice a week in the vessel I am now using next fall. I may need a more vessel with a covered cabin and heater.

- 2) Describe what actions/activities will be taken to resolve the problem.
I have done two things to try and resolve the shift in herring/seal lion distribution in Sitka Sound and my not finding sea lions in the area where I predicted they would be this fall.
 - a. I modified and extended my survey area to north of Sitka where there were more sea lions, weather permitting.
 - b. I submitted a pre-proposal to NPUMMRC asking for supplemental funds for increasing vessel charter costs in December 01. This was accepted for a full proposal, which was submitted in January 02. I do not know the outcome of that proposal.

- 3) Explain special problems or differences between budgeted and actual expenditures.
My expenditures thus far have been fairly close to my projected budget.

Prepared by: Jan Straley Date: January 31, 2002
Principal Investigator